SERVICE MANUAL
Level 1&2

NOKIA 6300i | NOKIA 6301 | NOKIA 6301b

RM-337 | RM-322 | RM-323

Transceiver characteristics:

Band:

EGSM:

-RM-322: Tri-band EDGE phone for EGSM 900/1800/1900MHz

-RM-323: Tri-band EDGE phone for EGSM 850/1800/1900MHz

-RM-337: Tri-band EDGE phone for EGSM 900/1800/1900MHz

WCDMA: -----

Display:

LCD: 5.08cm (2inch) QVGA display with 16.7M true colors, resolution 240 x 320 pixel

Camera:

Camera: 2.0 Megapixel, 8x digital zoom

Operating System:

Series 40

Connections:

Wireless: Bluetooth, WLAN

Connector: Mini USB Connector, AV Connector 2.5mm

Memory:

MicroSD™

Transceiver with BL-4c Li-Ion battery pack

Talk time	Standby	Note
up to 3.5h	up to 14.5days	Depends on network parameters and phone settings

Environmental characteristics:

- Lead-free soldered

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1. CHANGE HISTORY

Status	Version No.	Date	Comments
Draft	0.1	11.Oct.2007	Initial draft
Approved	1.0	12.Oct.2007	Approved
Approved	2.0	26.Mrz.2008	Approved

The purpose of this document is to help NOKIA service levels 1 and 2 workshop technicians to carry out service to NOKIA products. This Service Manual is to be used only by authorized NOKIA service suppliers, and the content of it is confidential. Please note that NOKIA provides also other guidance documents (e.g. Service Bulletins) for service suppliers, follow these regularly and comply with the given instructions.

While every endeavor has been made to ensure the accuracy of this document, some errors may exist.
If you find any errors or if you have further suggestions, please notify NOKIA using the address below:

CMO Operation & Logistics
Training and Vendor Development
Multimedia Creation & Support
mailto:Service.Manuals@nokia.com

Please keep in mind also that this documentation is continuously being updated and modified, so watch always out for the newest version.

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The availability of particular products may vary by region.
IMPORTANT
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3. WARNINGS AND CAUTIONS

Warnings and Cautions

Please refer to the phone's user guide for instructions relating to operation, care and maintenance including important safety information. Note also the following:

Warnings:

1. CARE MUST BE TAKEN ON INSTALLATION IN VEHICLES FITTED WITH ELECTRONIC ENGINE MANAGEMENT SYSTEMS AND ANTI–SKID BRAKING SYSTEMS. UNDER CERTAIN FAULT CONDITIONS, EMITTED RF ENERGY CAN AFFECT THEIR OPERATION. IF NECESSARY, CONSULT THE VEHICLE DEALER/MANUFACTURER TO DETERMINE THE IMMUNITY OF VEHICLE ELECTRONIC SYSTEMS TO RF ENERGY.
2. THE HANDPORTABLE TELEPHONE MUST NOT BE OPERATED IN AREAS LIKELY TO CONTAIN POTENTIALLY EXPLOSIVE ATMOSPHERES, EG PETROL STATIONS (SERVICE STATIONS), BLASTING AREAS ETC.
3. OPERATION OF ANY RADIO TRANSMITTING EQUIPMENT, INCLUDING CELLULAR TELEPHONES, MAY INTERFERE WITH THE FUNCTIONALITY OF INADEQUATELY PROTECTED MEDICAL DEVICES. CONSULT A PHYSICIAN OR THE MANUFACTURER OF THE MEDICAL DEVICE IF YOU HAVE ANY QUESTIONS. OTHER ELECTRONIC EQUIPMENT MAY ALSO BE SUBJECT TO INTERFERENCE.

Cautions:

1. Servicing and alignment must be undertaken by qualified personnel only.
2. Ensure all work is carried out at an anti–static workstation and that an anti–static wrist strap is worn.
3. Use only approved components as specified in the parts list.
4. Ensure all components, modules screws and insulators are correctly re–fitted after servicing and alignment.
5. Ensure all cables and wires are repositioned correctly.

4. ESD PROTECTION

Nokia requires that service points have sufficient ESD protection (against static electricity) when servicing the phone.
Any product of which the covers are removed must be handled with ESD protection. The SIM card can be replaced without ESD protection if the product is otherwise ready for use.
To replace the covers ESD protection must be applied.
All electronic parts of the product are susceptible to ESD. Resistors, too, can be damaged by static electricity discharge.
All ESD sensitive parts must be packed in metallized protective bags during shipping and handling outside any ESD Protected Area (EPA).
Every repair action involving opening the product or handling the product components must be done under ESD protection.
ESD protected spare part packages MUST NOT be opened/closed out of an ESD Protected Area.
For more information and local requirements about ESD protection and ESD Protected Area, contact your local Nokia After Market Services representative.

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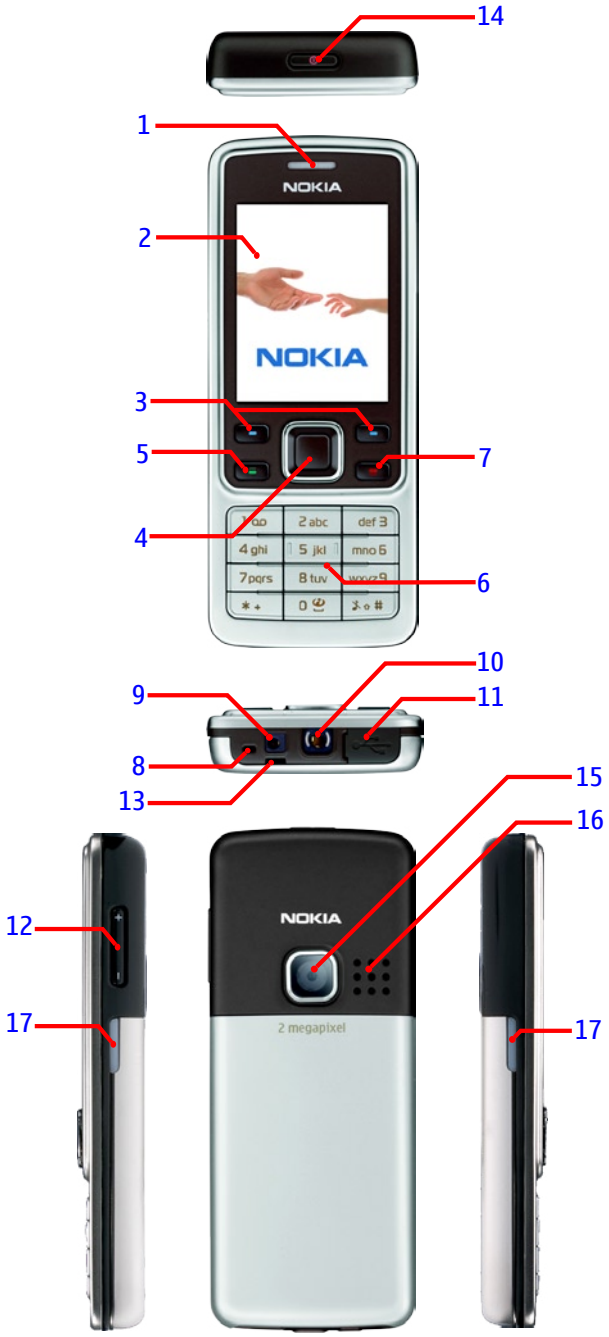
5. PCI OVERVIEW

6301 RM-322 / 6301b RM-323 / 6300i RM-337
Product Controls & Interfaces



1 — Earpiece
2 — Display
3 — Left and right selection keys
4 — Navi™ key. 4-way scroll key and middle selection key.
5 — Call key
6 — Keypad
7 — End key
8 — Microphone
9 — Charger connector
10 — Nokia AV 2.5 mm connector
11 — Mini USB cable connector
12 — Volume keys
13 — Strap holder
14 — Power key
15 — Camera lens
16 — Loudspeaker
17 — Reminder LED's

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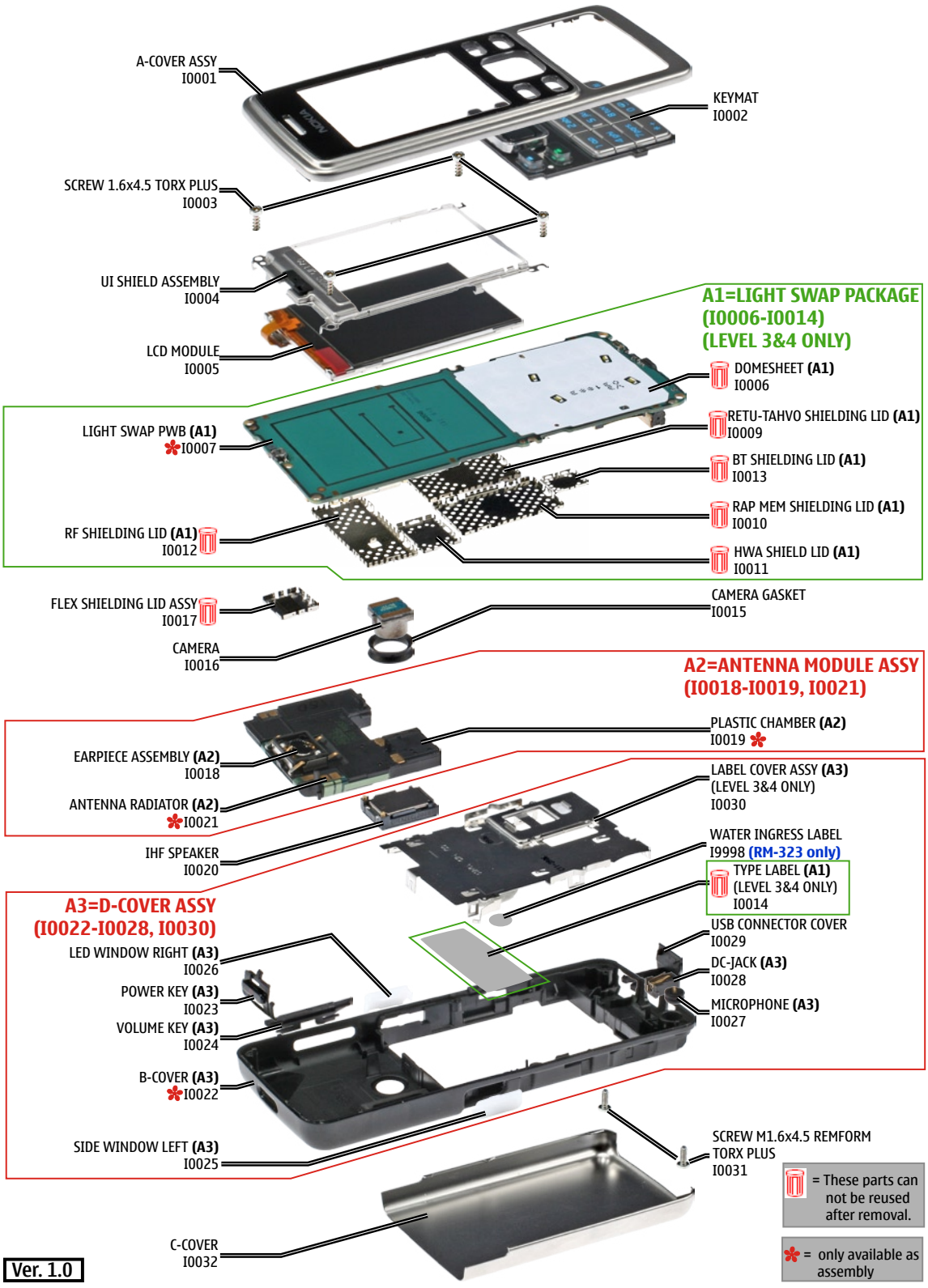
6. EXPLODED VIEW

See corresponding ITEM/CIRCUIT REF in the Spare Parts Service Bulletins on NOL.

6301 RM-322 / 6301b RM-323 / 6300i RM-337 EXPLODED VIEW


A-COVER ASSY I0001
KEYMAT I0002
SCREW 1.6x4.5 TORX PLUS I0003
UI SHIELD ASSEMBLY I0004
LCD MODULE I0005
A1=LIGHT SWAP PACKAGE (I0006-I0014) (LEVEL 3&4 ONLY)
DOMESHEET (A1) I0006
LIGHT SWAP PWB (A1) *I0007
RETU-TAHVO SHIELDING LID (A1) I0009
BT SHIELDING LID (A1) I0013
RAP MEM SHIELDING LID (A1) I0010
RF SHIELDING LID (A1) I0012
HWA SHIELD LID (A1) I0011
FLEX SHIELDING LID ASSY I0017
CAMERA GASKET I0015
CAMERA I0016
A2=ANTENNA MODULE ASSY (I0018-I0019, I0021)
PLASTIC CHAMBER (A2) I0019 *
EARPIECE ASSEMBLY (A2) I0018
ANTENNA RADIATOR (A2) *I0021
LABEL COVER ASSY (A3) (LEVEL 3&4 ONLY) I0030
IHF SPEAKER I0020
WATER INGRESS LABEL I9998 (RM-323 only)
TYPE LABEL (A1) (LEVEL 3&4 ONLY) I0014
A3=D-COVER ASSY (I0022-I0028, I0030)
USB CONNECTOR COVER I0029
LED WINDOW RIGHT (A3) I0026
DC-JACK (A3) I0028
POWER KEY (A3) I0023
MICROPHONE (A3) I0027
VOLUME KEY (A3) I0024
B-COVER (A3) *I0022
SIDE WINDOW LEFT (A3) I0025
SCREW M1.6x4.5 REMFORM TORX PLUS I0031
C-COVER I0032
= These parts can not be reused after removal.
* = only available as assembly
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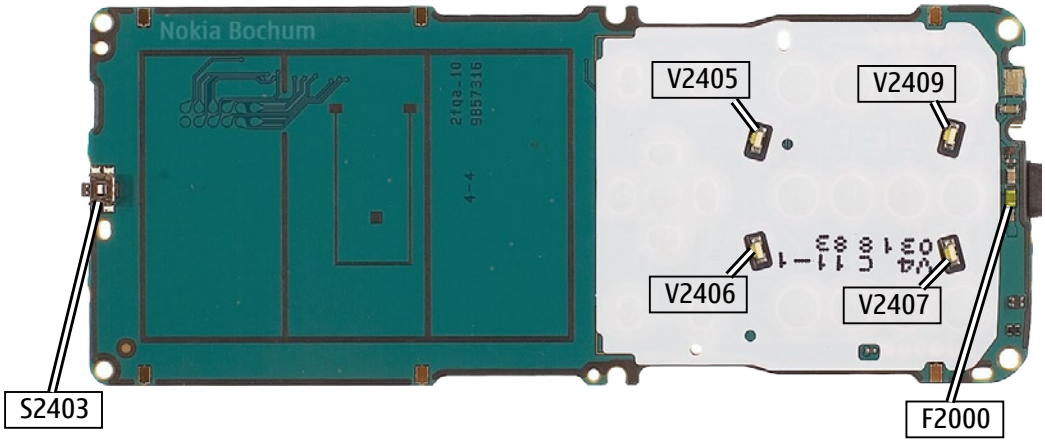
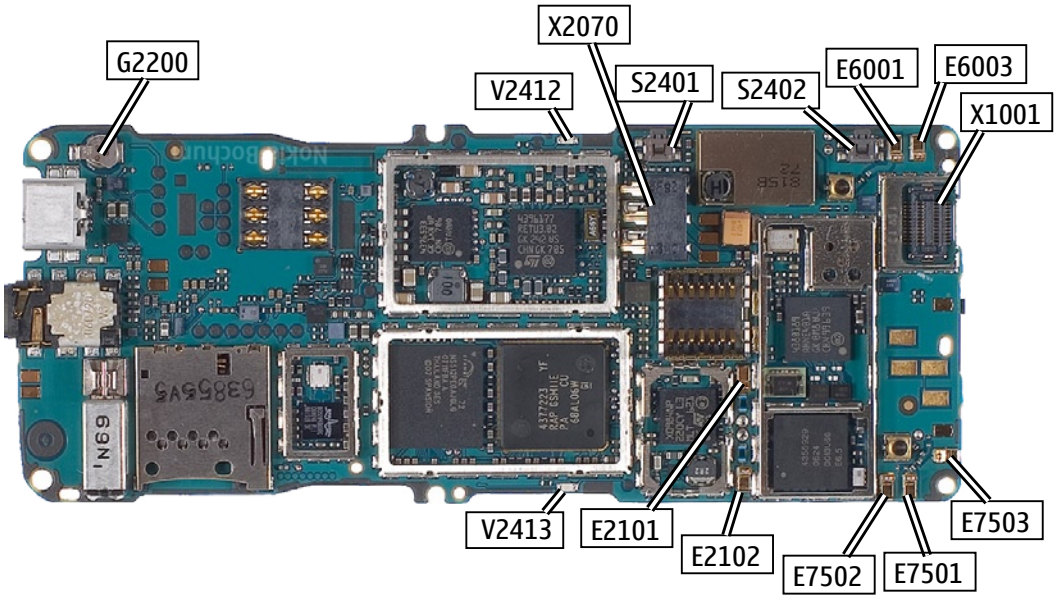
7. LEVEL 2 SOLDER COMPONENTS

N6301 RM-322/ 6301b RM-323 / 6300i RM-337
Components overview

Solder components only for LEVEL 2





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8. SERVICE DEVICES

<table>
<tr>
<td>

FLS-5 incl. ACF-8, Driver and User Guide
Dongle and flash device incorporated into one package, developed specifically for POS use.</td>
<td>
ACF-8
Universal Power Supply is used to power FLS-5.</td>
<td>
Travel Charger AC-4
Small and lightweight charger for fast charging of your phone battery.</td>
</tr>
<tr>
<td>
DKE-2
Service Cable to connect the PC with the mini USB connector.</td>
<td>

SS-45
Camera removal tool. One side is for disassembly, the other side for assembly.</td>
<td>

RJ-148
Soldering Jig</td>
</tr>
<tr>
<td>

RJ-230
Universal Soldering Jig.

Order code: 0780264</td>
<td>

Internal Battery BL-4c
Inserted under the back cover, this Li-Ion battery provides power in a lightweight package.</td>
<td>

NMP Standard Toolkit (V2)
For more informations refer to the Service Bulletin (SB-011) on NOKIA Online.
Supplier or manufacturer contacts for tool re-order can be found in “Recommended service equipment” document on NOKIA Online.
Order code: 0772040</td>
</tr>
</table>

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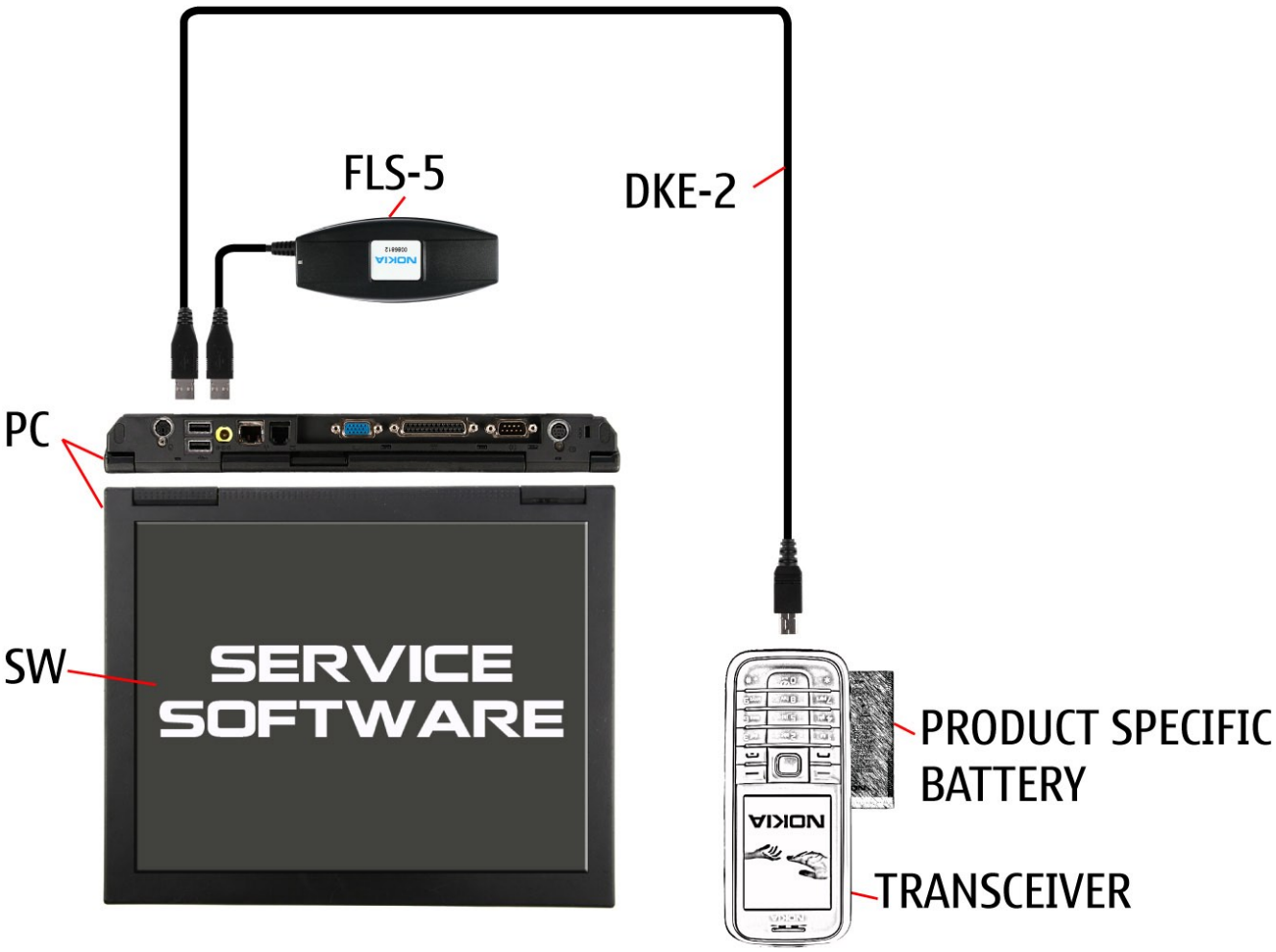
9. SW-UPDATE

Flash Concept – (Point of Sales)

To use FLS-5 Flash Dongle you have to follow the user guide inside the sales package. Please check always for the latest version of flash software, which is available on
NOKIA Online.



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10. DISASSEMBLY - HINTS

1. Needed tools: SRT-6, metal tweezers, SS-93, SS-45 camera removal tool, a straight bladed screwdriver, dental pick, bit holder with a torx plus size 6 bit, a torque driver, DC plug

2. Always cover the windows with a protective film.

3. Shift out the C-COVER.

4. **Note! Before disassembling the phone, make sure that the micro SD card has been removed.** Remove both screws in the order shown.

5. Remove the screws.

6. Unlock the plastic clips of the A-COVER with the SRT-6...

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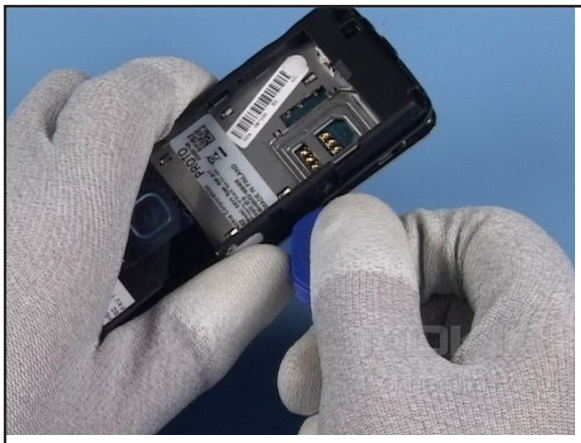
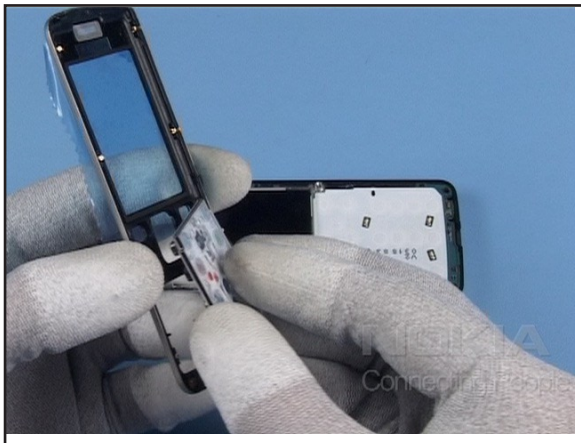
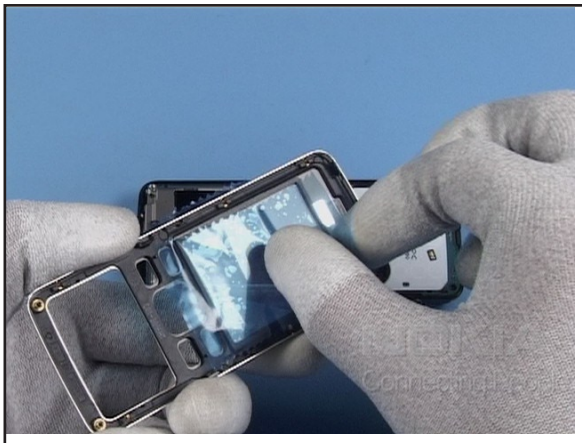


7. ...on both sides.

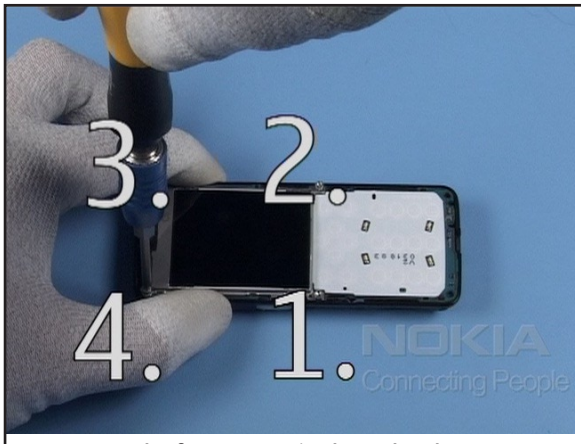
8. Lift up the cover now.



9. Remove the KEYMAT



10. Protect the window from inner side.



11. Unscrew the four screws in the order shown.

12. Remove the screws. Separate these screws, do not mismatch them with the others.

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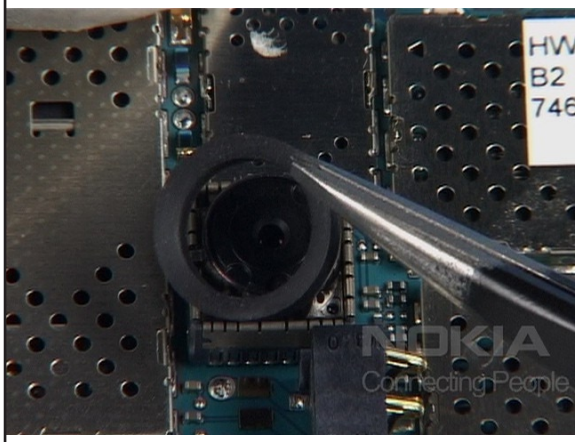
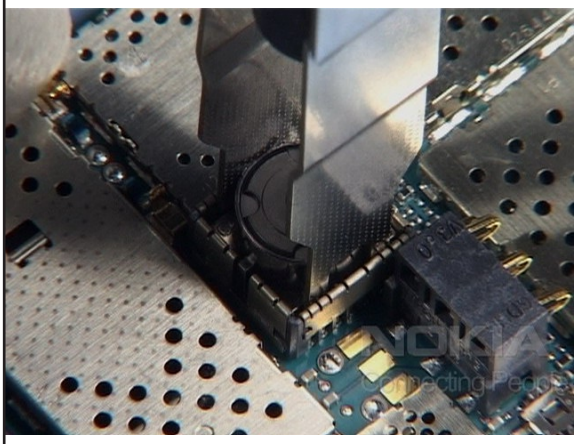
13. Cover the display with a film.

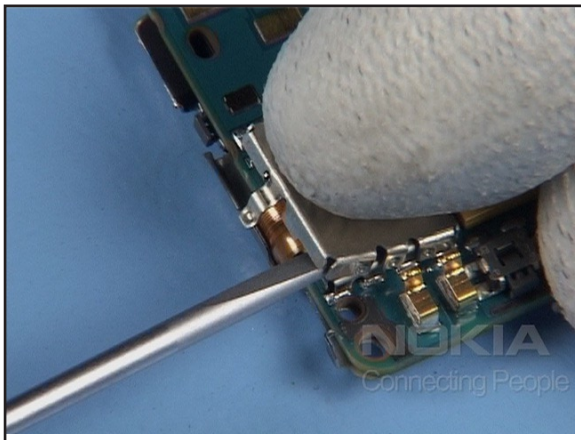
14. **Note! Before removing the B-COVER, make sure that the micro SD card has been removed.** Turn the assembly, lift up the B-COVER.



15. Remove the CAMERA GASKET.



16. Unlock and remove the CAMERA with the SS-45.



17. Release the FLEX SHIELDING LID and discard it.

18. Do not use it again.

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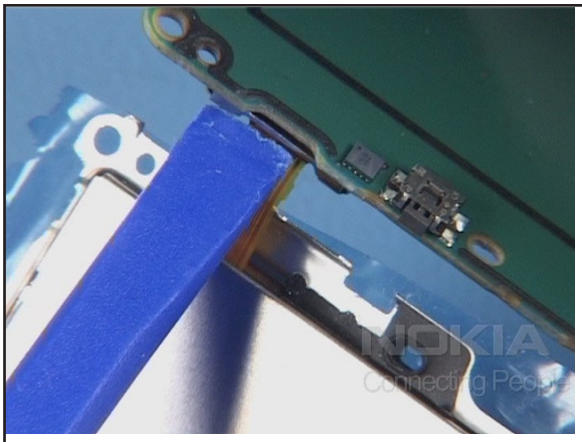
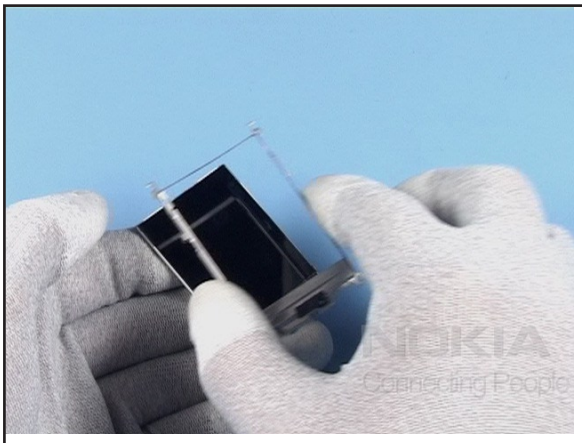
19. Unlock both metal clips of the UI SHIELD.



20. Carefully unlock the flex connector of the LCD MODULE.

21. Peel up the protective film.



22. Now separate the parts as shown.

23. Cover the display with a film again.

24. Remove the MICROPHONE and the DC JACK.

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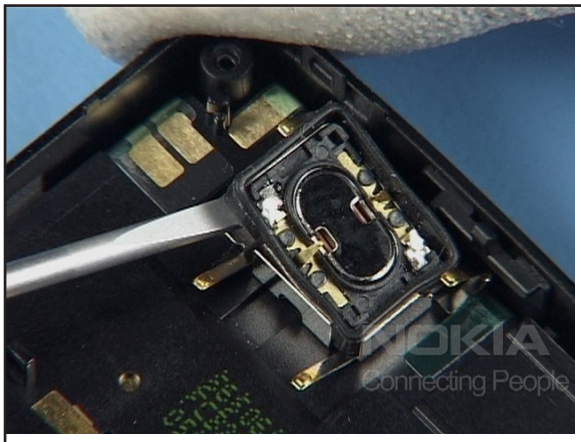
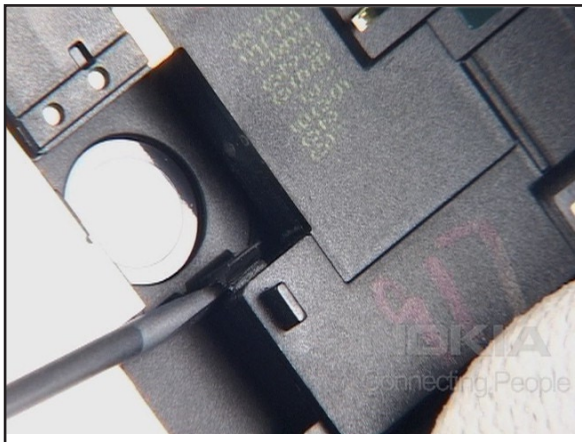
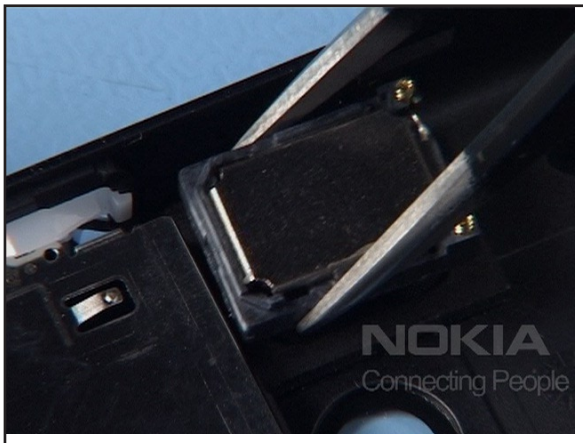


25. Carefully lever out the EARPIECE ASSEMBLY.

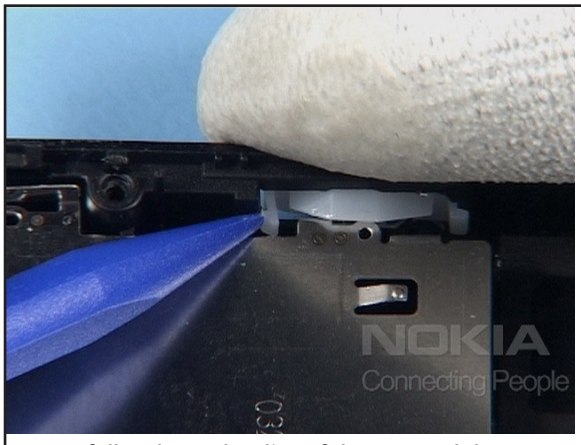


26. Carefully unlock the clip securing the PLASTIC CHAMBER.

27. Now remove it.



28. The IHF SPEAKER is not glued and can be removed easily.



29. Carefully release the clips of the LED- and the SIDE WINDOW.

30. The POWER- and the VOLUME KEY can be removed easily.

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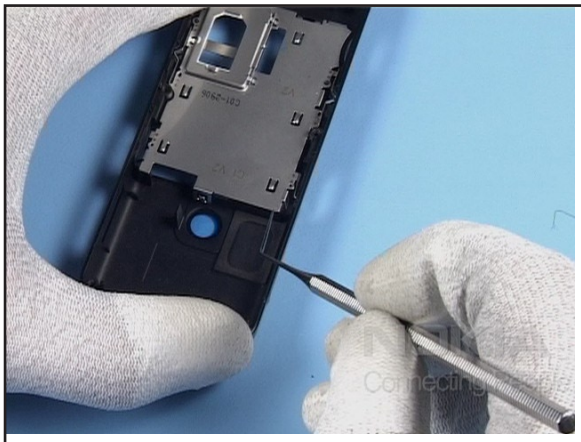
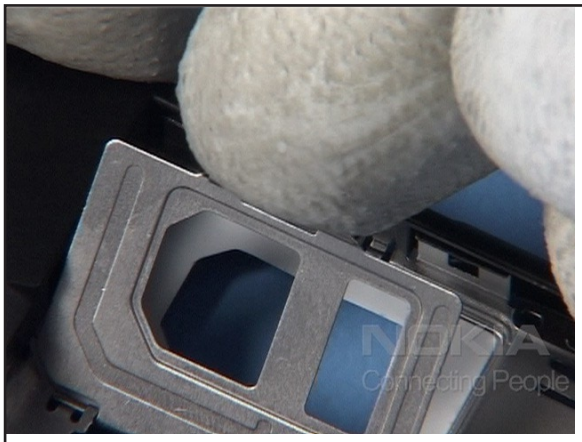
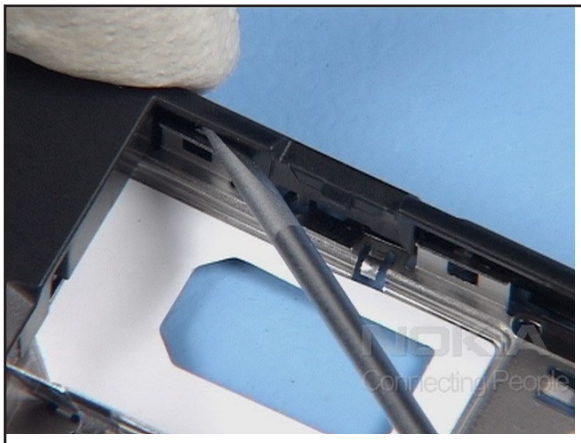


31. Release the shown metal snaps of the LABEL COVER ASSY with the dental pick.



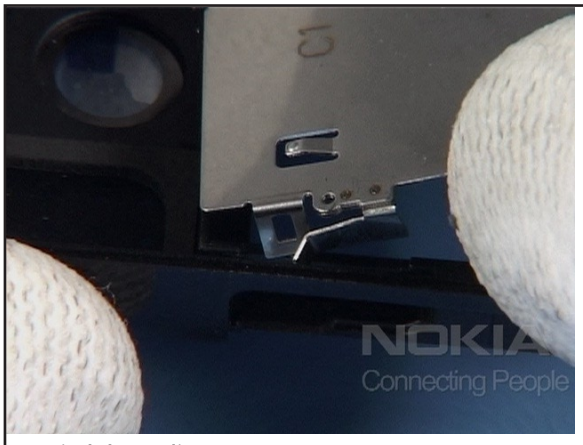
32. Turn the assembly and open the SIM lid.



33. Now release these two latches.

34. Use the dental tool to push out the last clips.

35. Release the LABEL COVER ASSEMBLY, beginning from the bottom side.



36. Mind these clips.

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37. The disassembly procedure is now completed.

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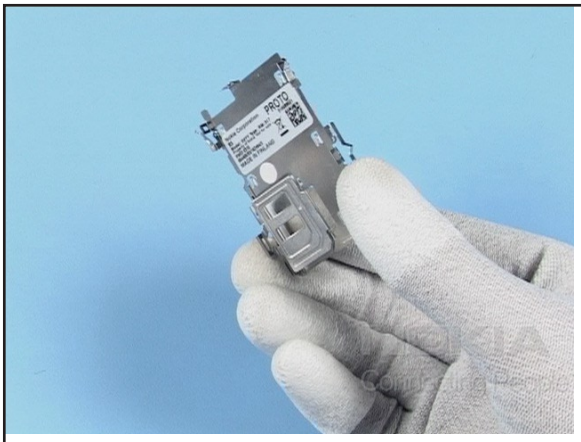
11. ASSEMBLY - HINTS

1. Assembly hints:

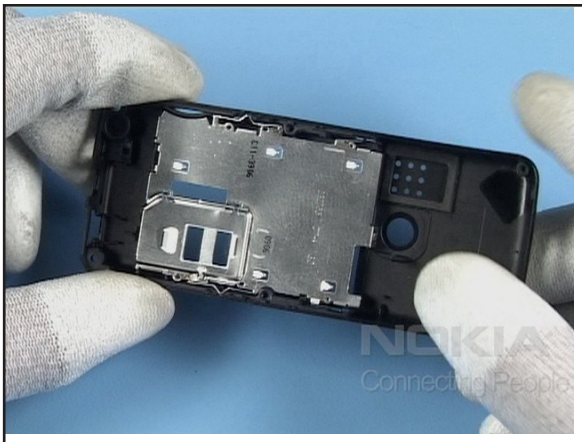


2. Keep in mind that the LABEL COVER ASSEMBLY with the TYPE LABEL must always be assembled together with the corresponding engine module.

3. Insert the LABEL COVER ASSEMBLY into the B-COVER as shown.

4. Carefully push all latches into their places.

5. Close the SIM lid.



6. Check the correct positioning of all these latches.

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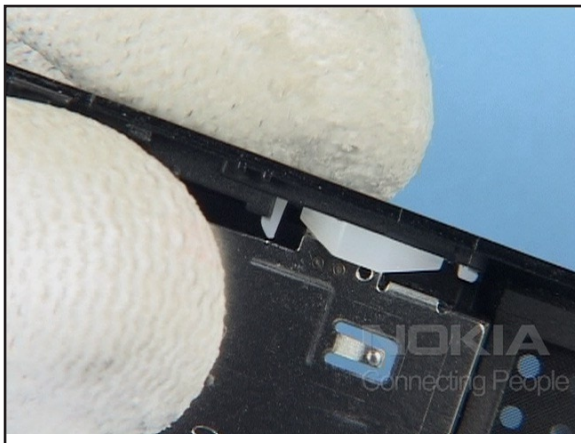
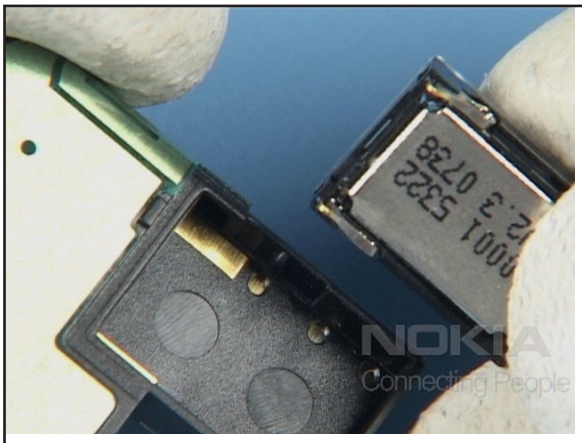
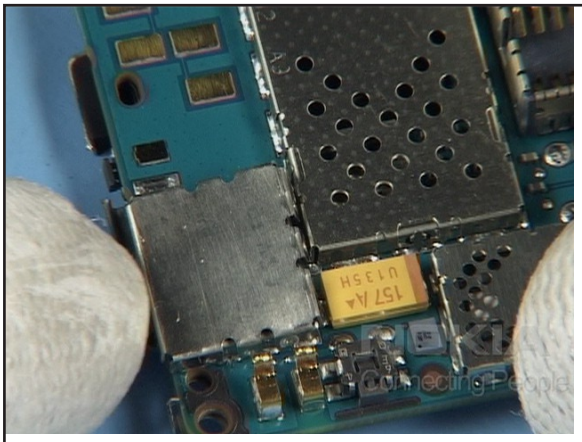


7. Insert the LED- and the SIDE- WINDOW. Note that they can't be interchanged.

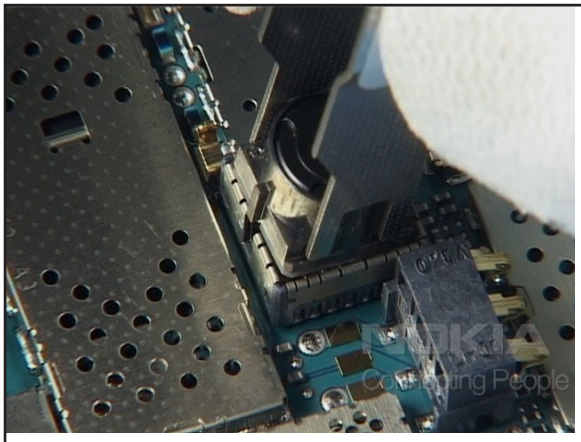


8. Note that the IHF SPEAKER contacts belongs to their pads.

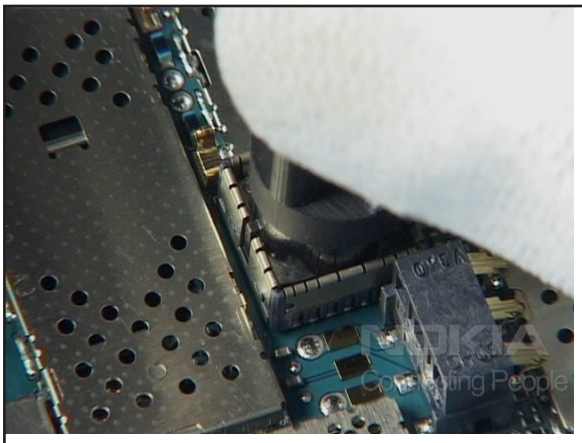
9. Secure all clips of the PLASTIC CHAMBER before going on.



10. Always use a new FLEX SHIELDING LID.



11. Mind the guiding tab while replacing the CAMERA.



12. Push it into its place.

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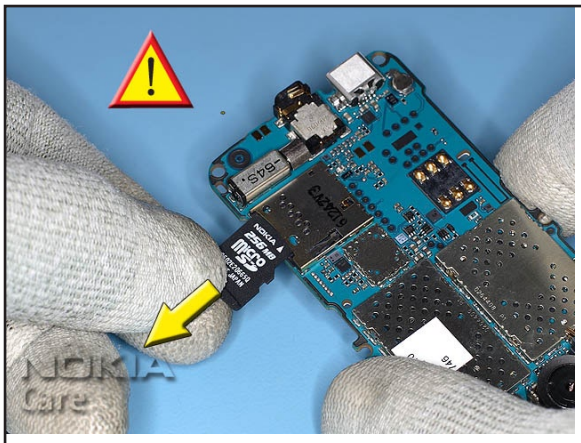
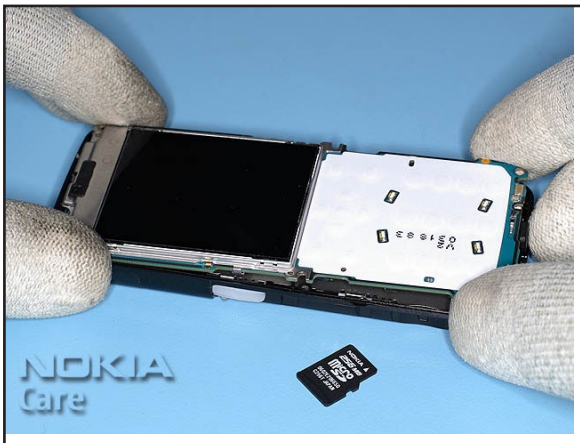
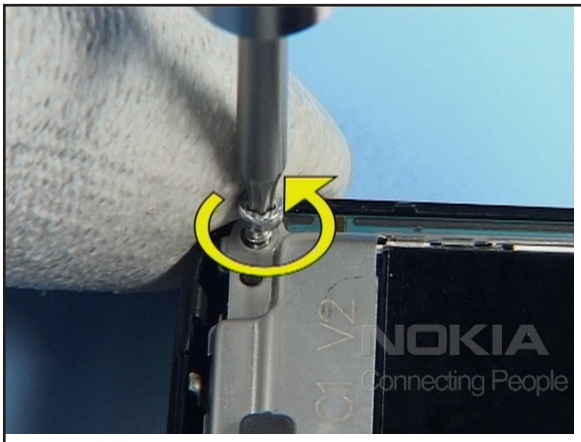


13. Make sure that the microSD card is not inserted, otherwise remove them.

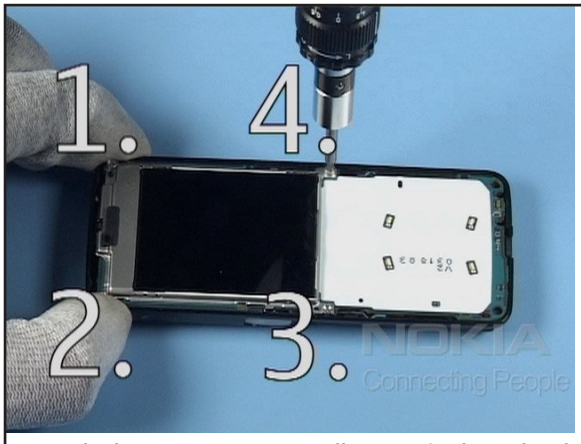


14. Place the assembly onto the B-COVER.

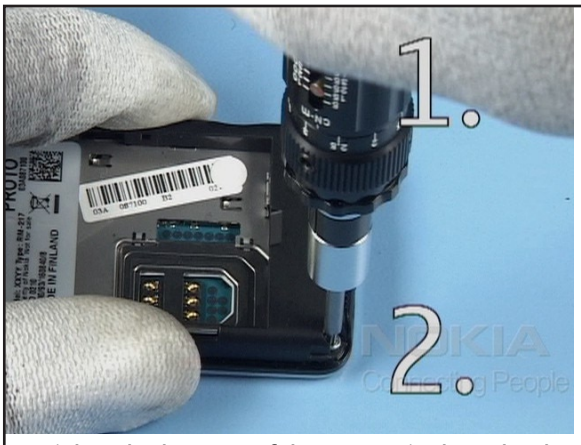
15. Set the correct torque.



16. Turn the screws to the left first to engage the threads, then tighten them slightly.



17. Apply the correct torque to all screws in the order shown.



18. Tighten both screws of the C-COVER in the order shown, too.

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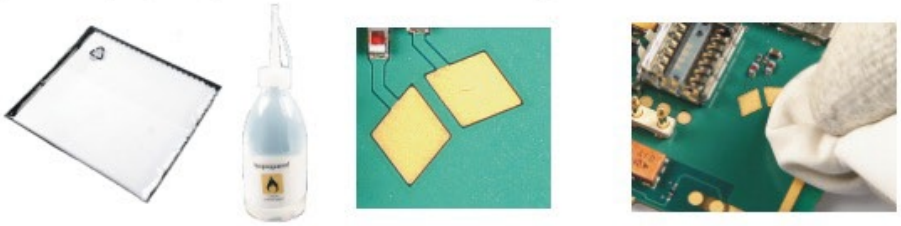
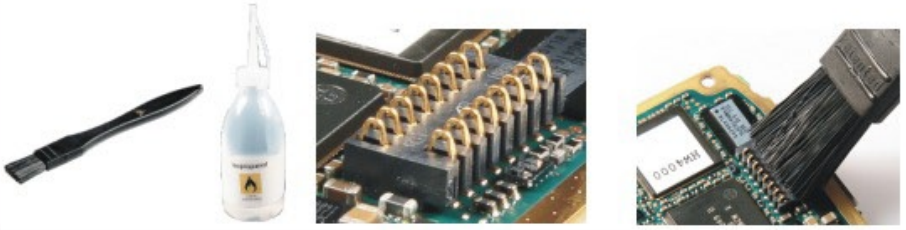
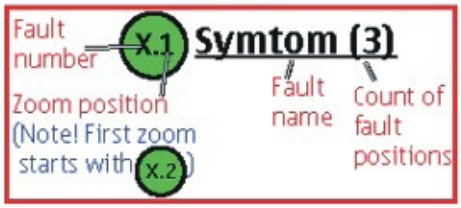
12. LEGEND FOR QUICK TROUBLE SHOOTER

Legend for Quick Trouble Shooter

This legend is valid for all parts of the Quick Trouble Shooter

Follow the steps until the problem is solved. If this doesn´t help, you are not authorized to go forward.

	Check the mechanical condition of the component (bent, broken or missing).
	Only marked components can be replaced. If additionally "**=CHANGE ASSY**" appears, then change the whole assembly (e.g. A4=D-COVER ASSEMBLY).
	Cloth usage: Check pads or contacts for optical and mechanical condition particularly regarding to corrosion. Clean it if necessary. 
	Measure component for electrical functionality and change, if needed. (Level 2 only)
	ESD Brush usage: Check contacts for optical and mechanical condition particularly regarding to corrosion. Clean it if necessary. 
	Explanation 

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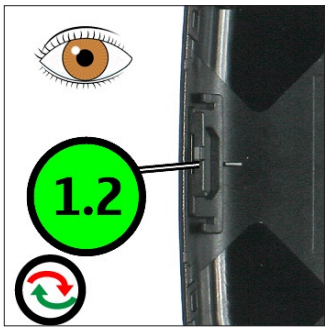
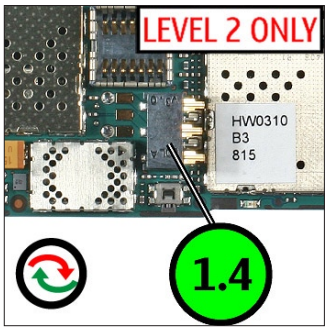
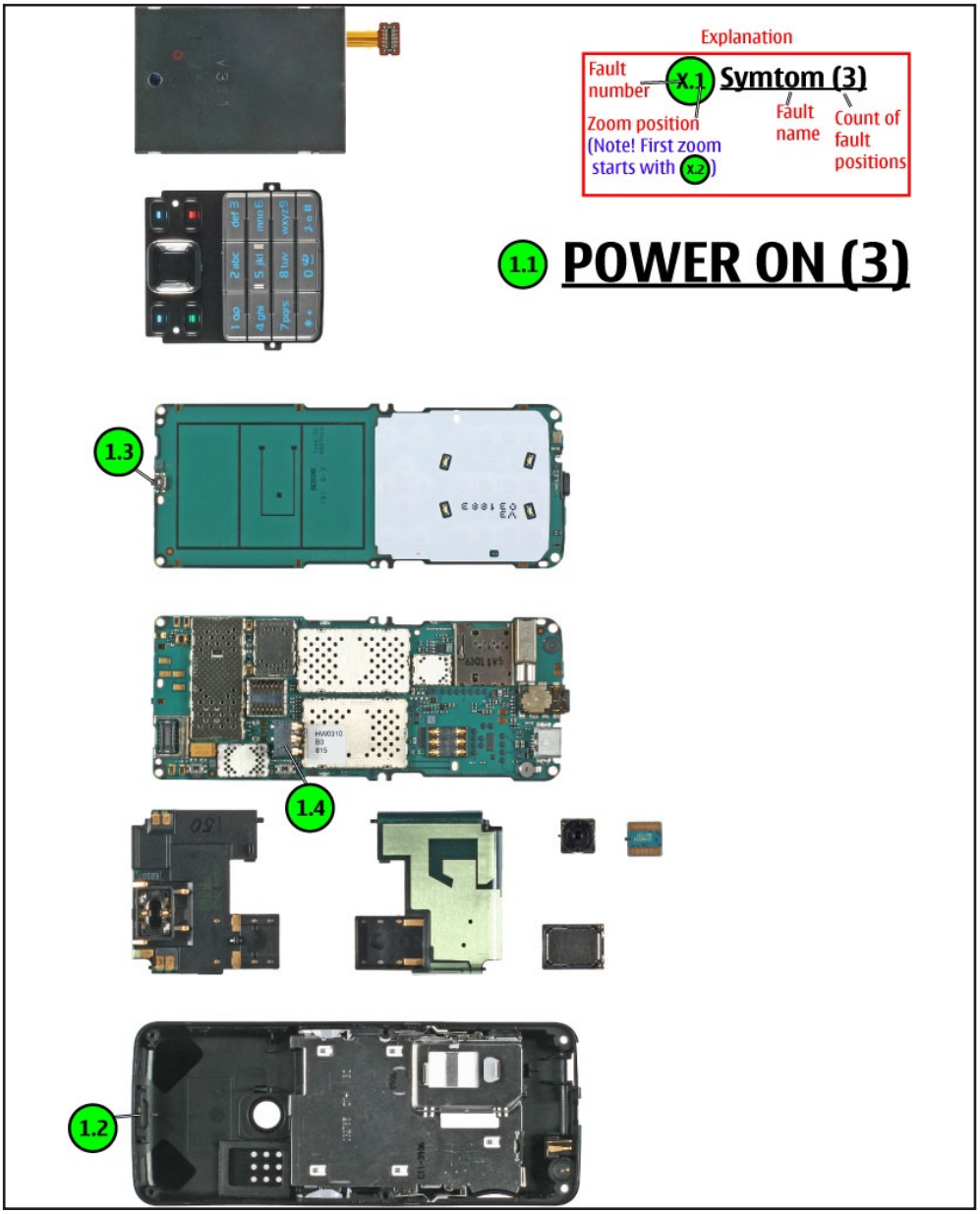
13. QUICK TROUBLE SHOOTER - POWER ON







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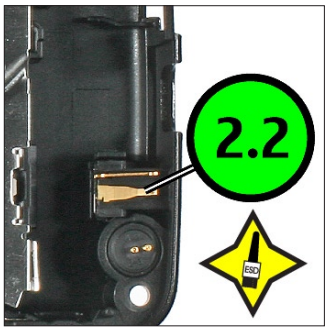
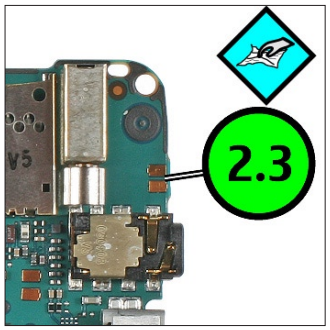
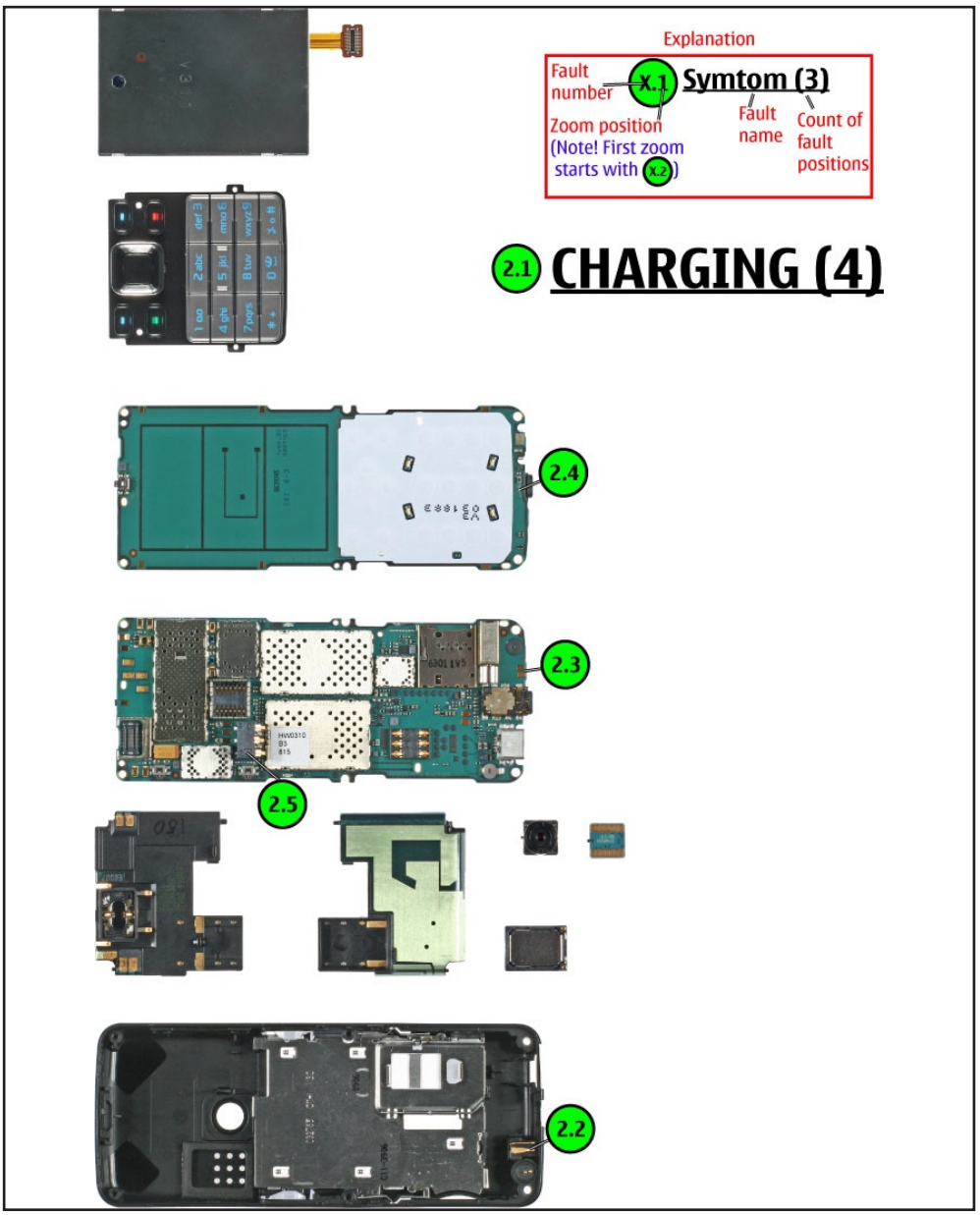
14. QUICK TROUBLE SHOOTER - CHARGING







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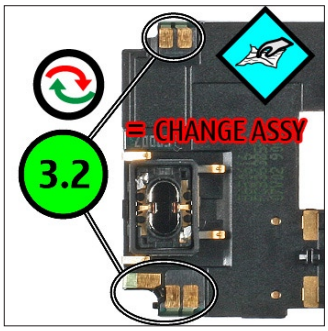
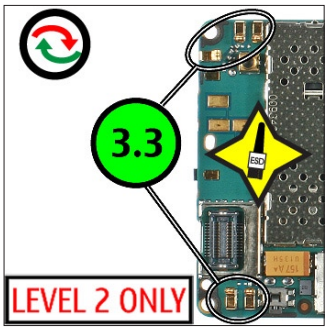
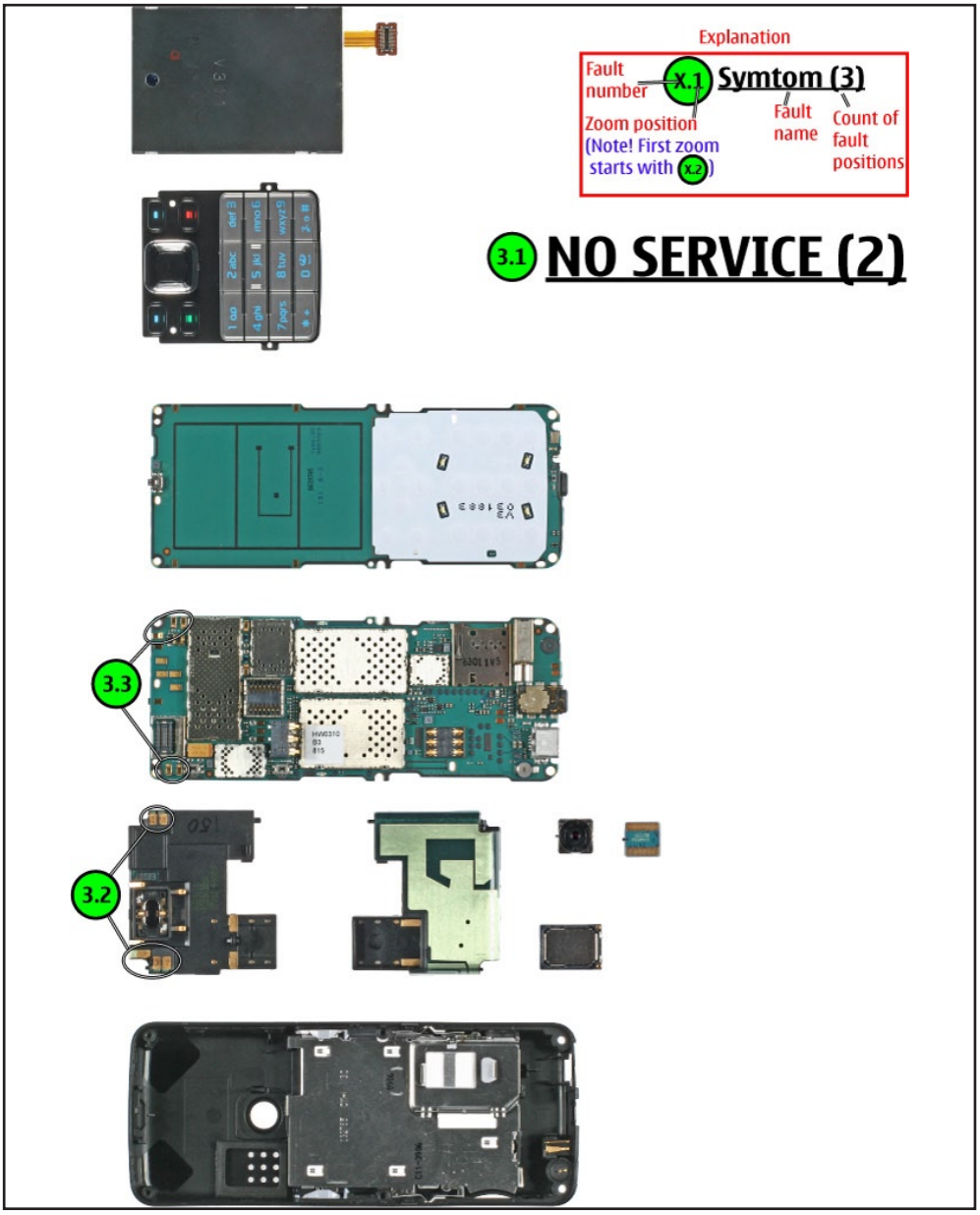
15. QUICK TROUBLE SHOOTER - NO SERVICE







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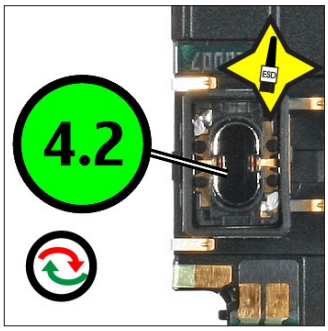
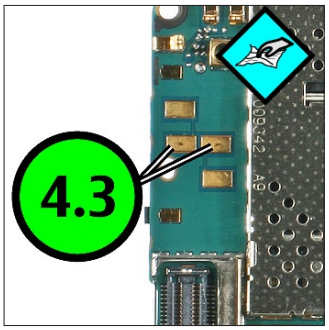
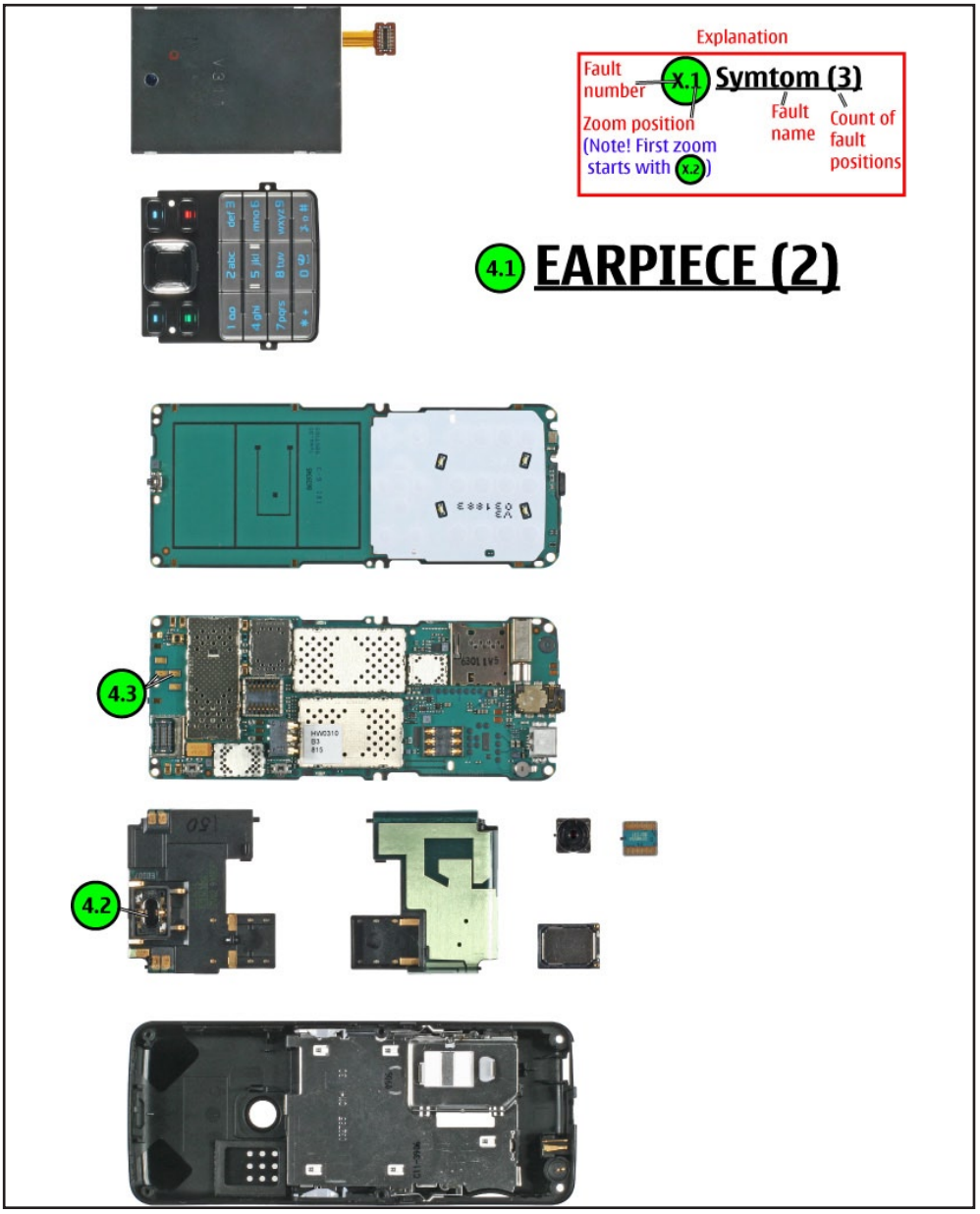
16. QUICK TROUBLE SHOOTER - EARPIECE







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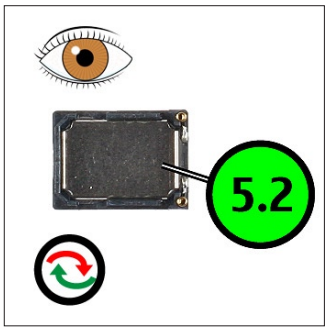
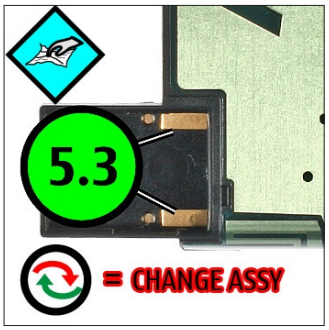
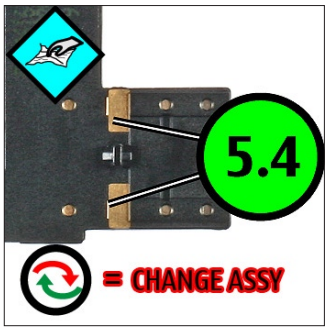
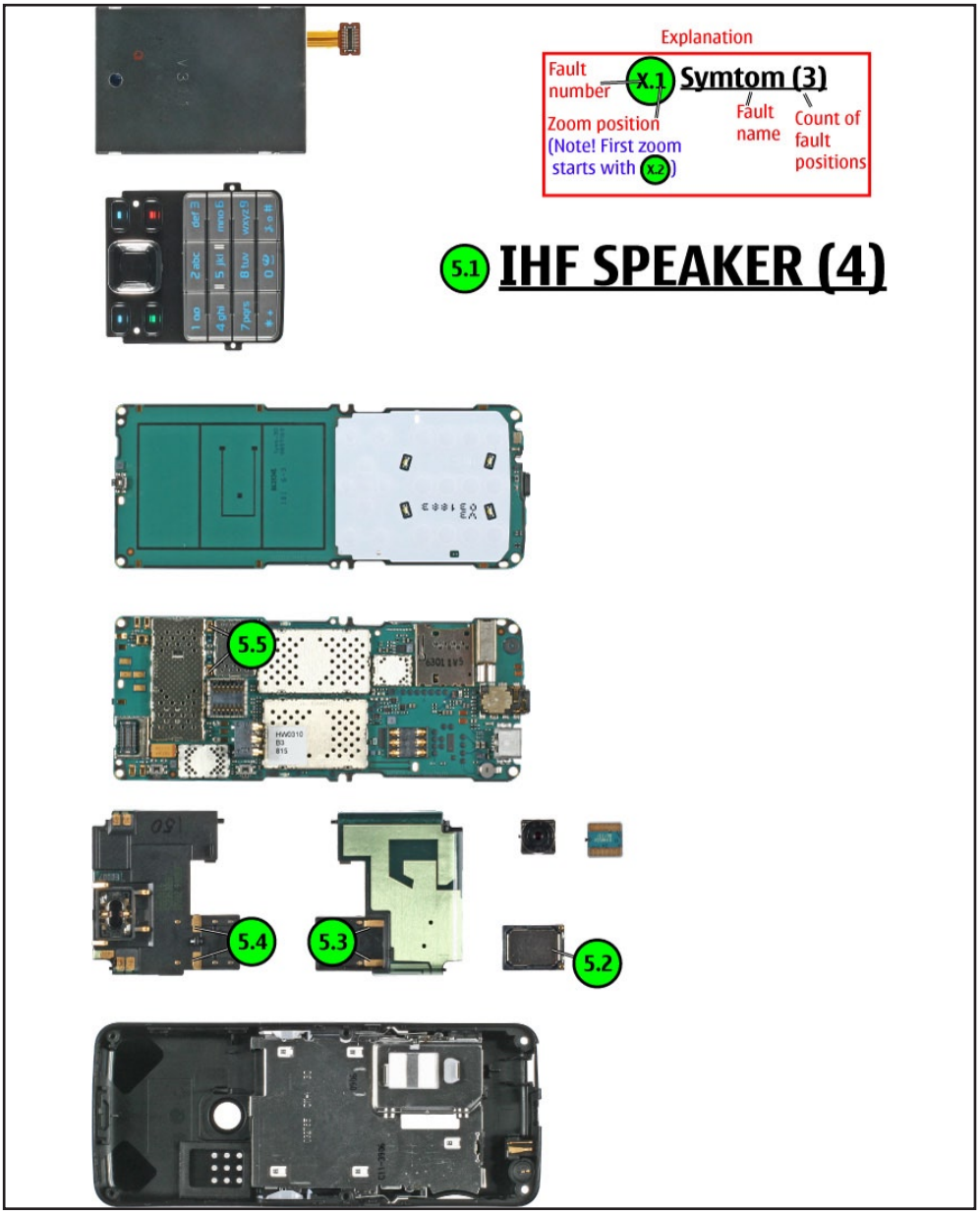
17. QUICK TROUBLE SHOOTER - IHF SPEAKER









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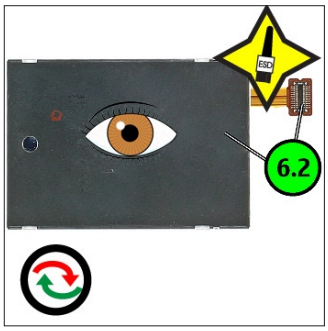
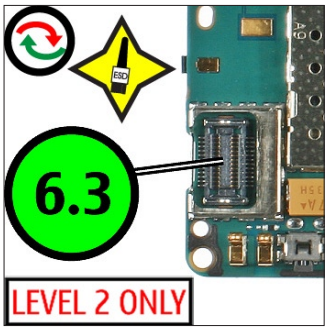
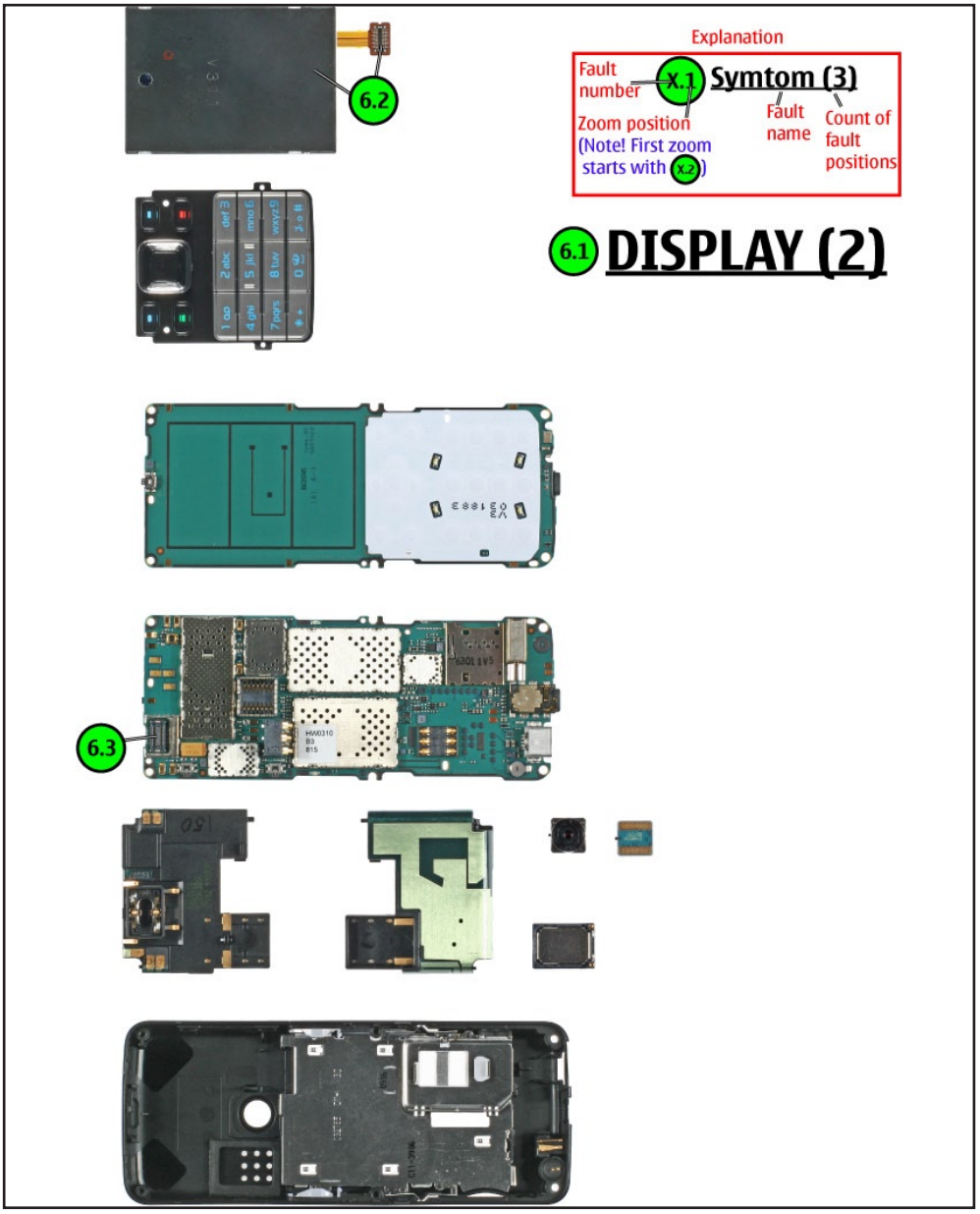
18. QUICK TROUBLE SHOOTER - DISPLAY







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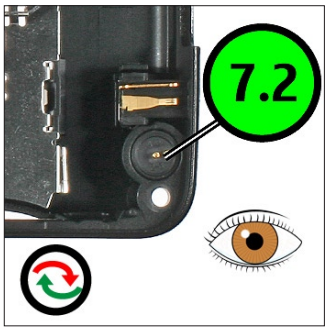
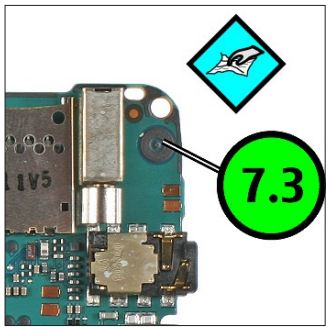
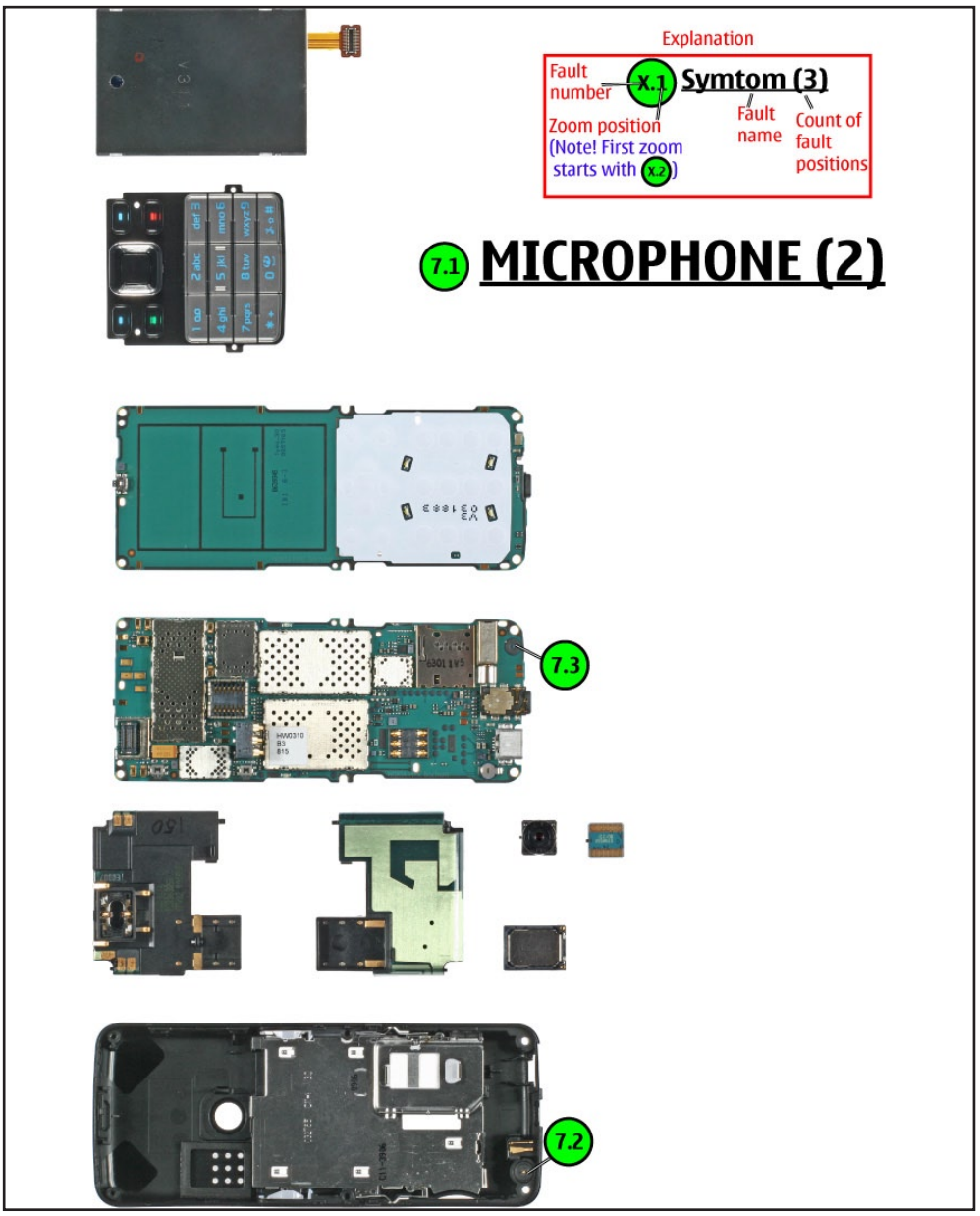
19. QUICK TROUBLE SHOOTER - MICROPHONE







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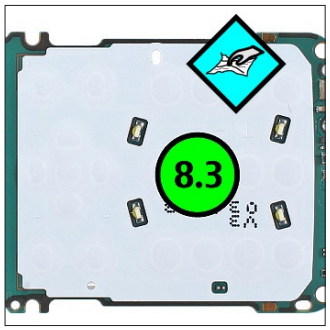
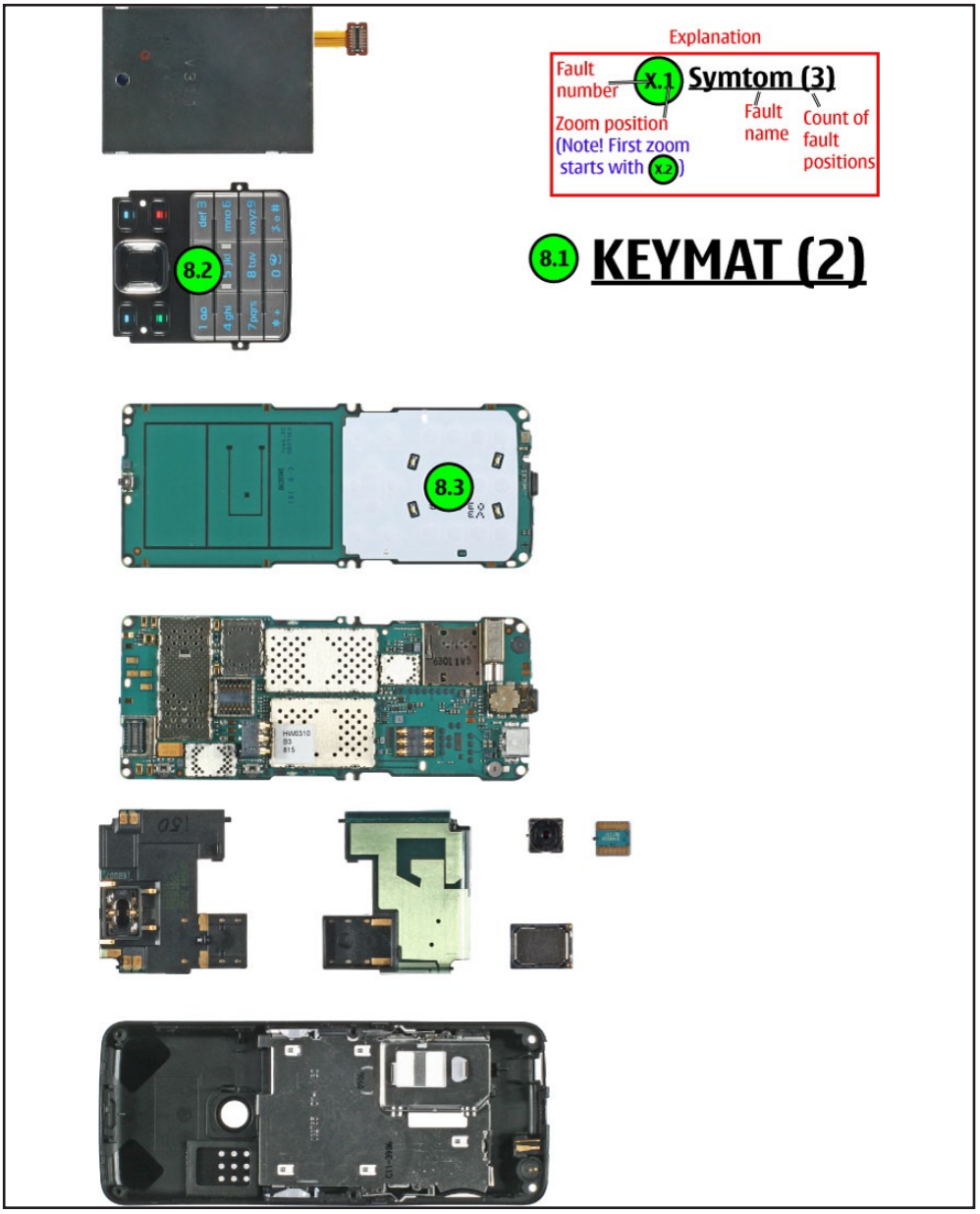
20. QUICK TROUBLE SHOOTER - KEYMAT





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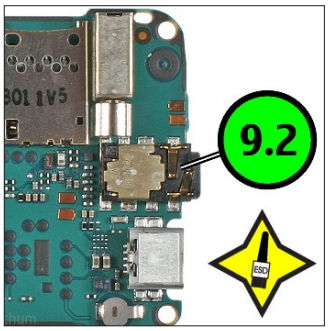
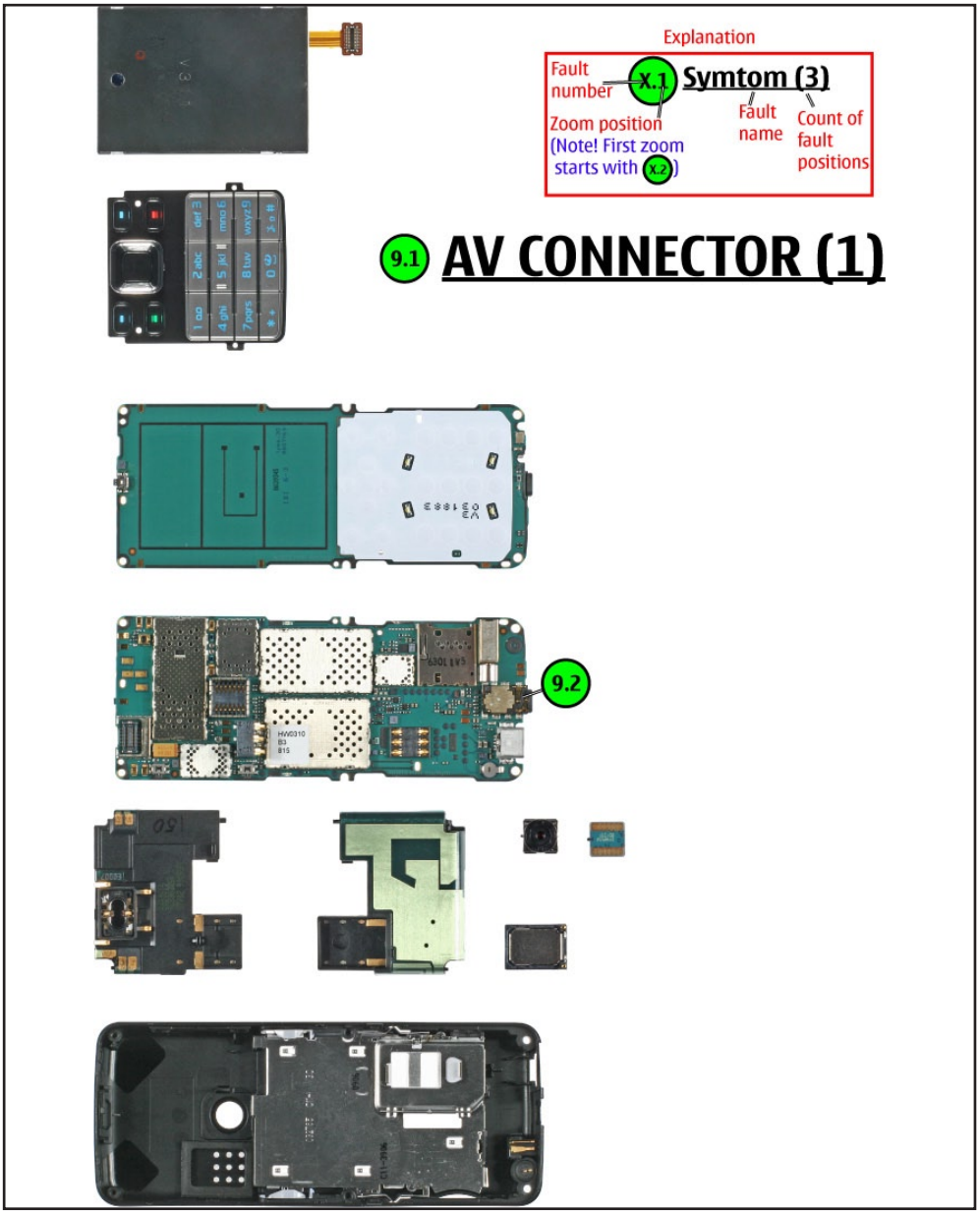
21. QUICK TROUBLE SHOOTER - AV CONNECTOR





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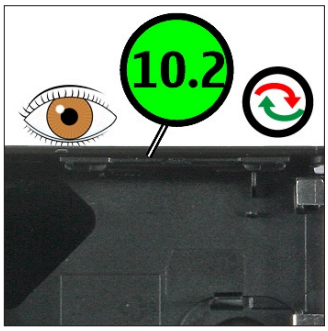
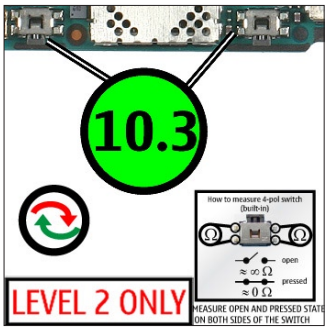
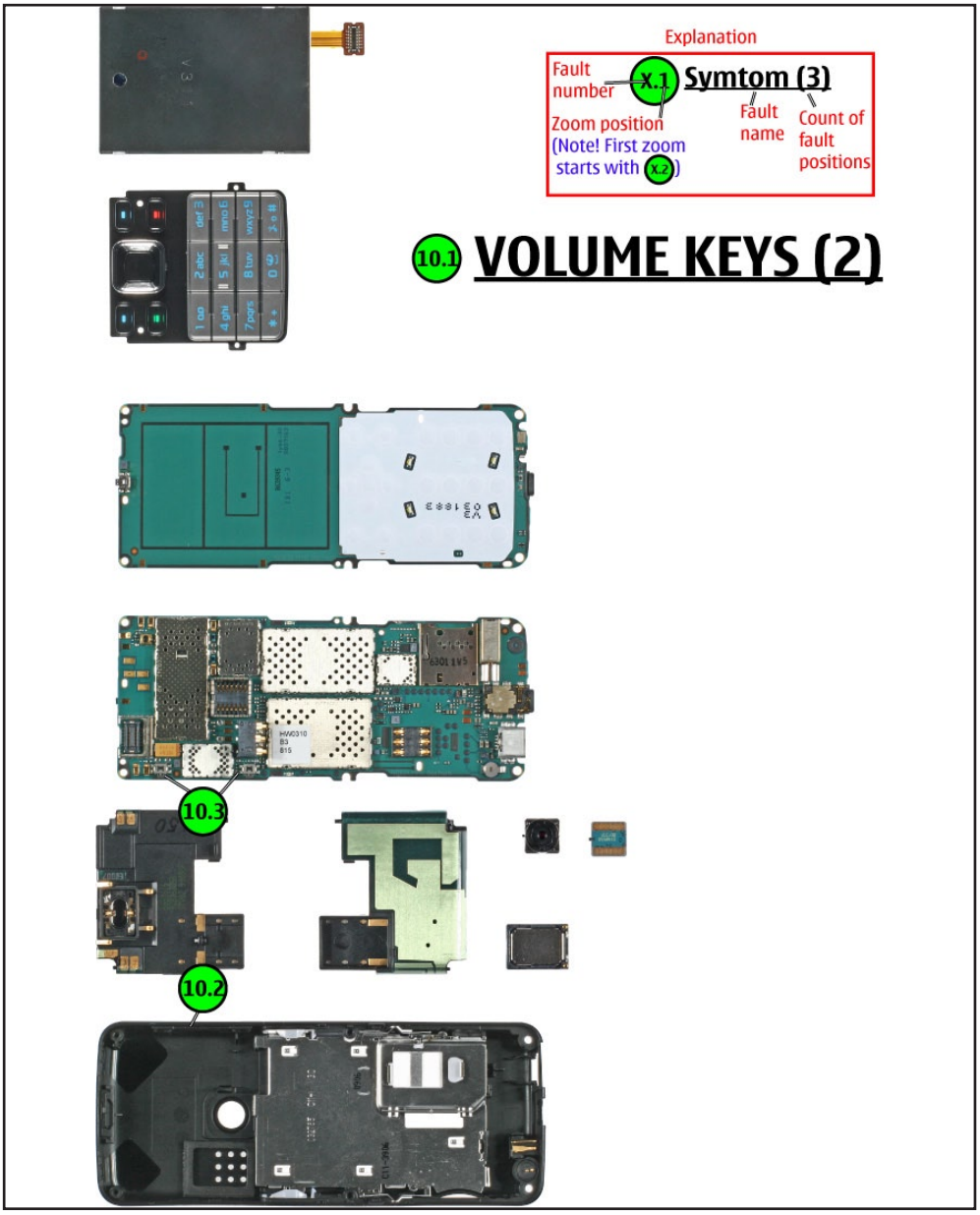
22. QUICK TROUBLE SHOOTER - VOLUME KEYS







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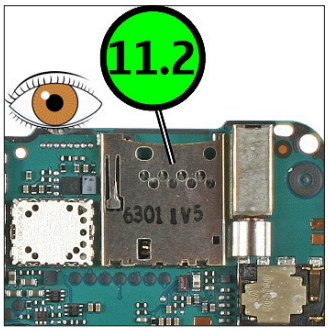
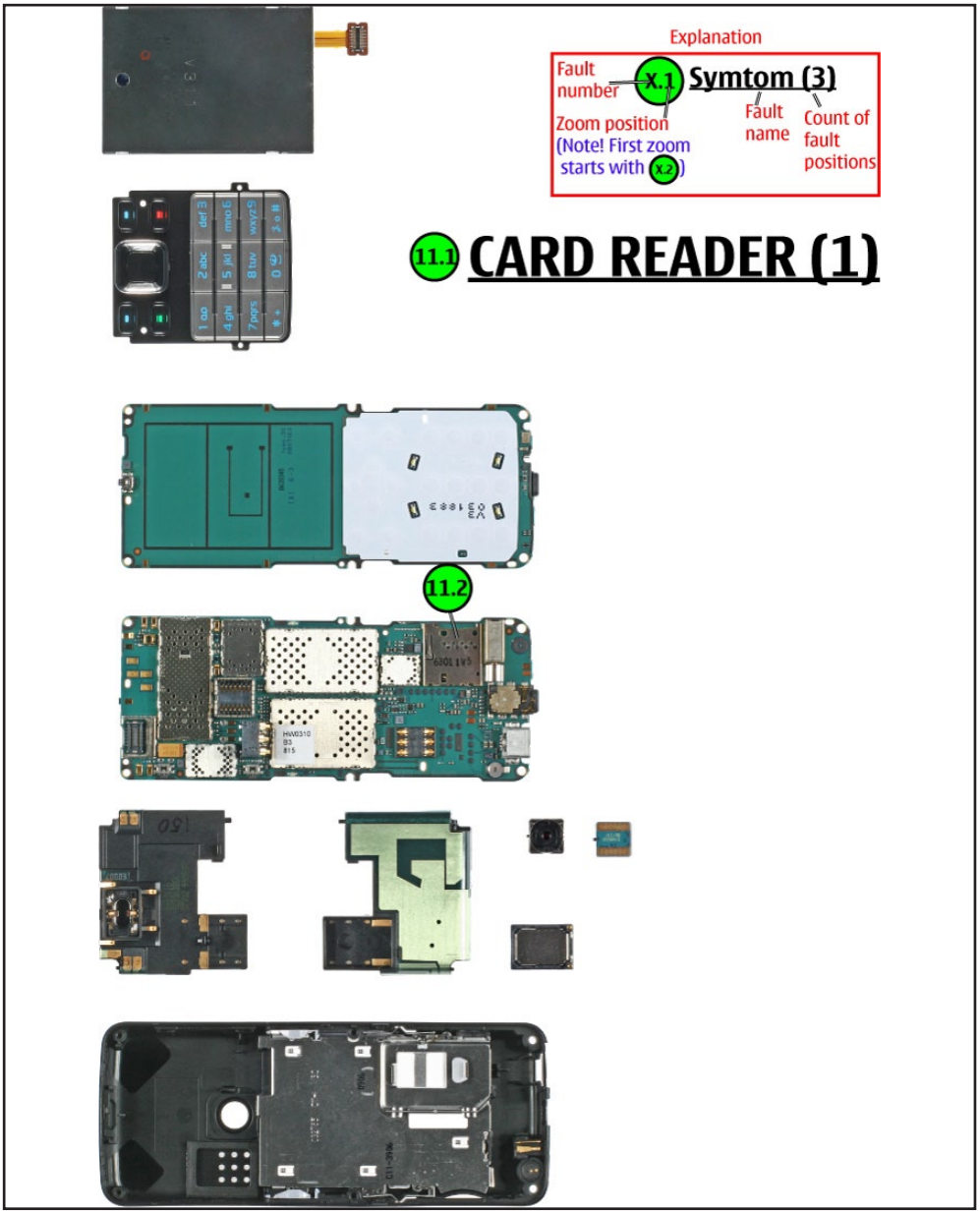
23. QUICK TROUBLE SHOOTER - CARD READER





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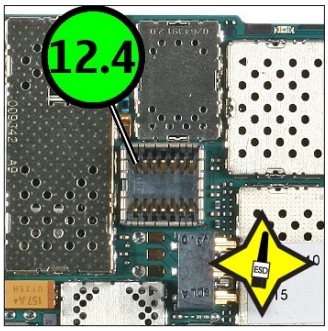
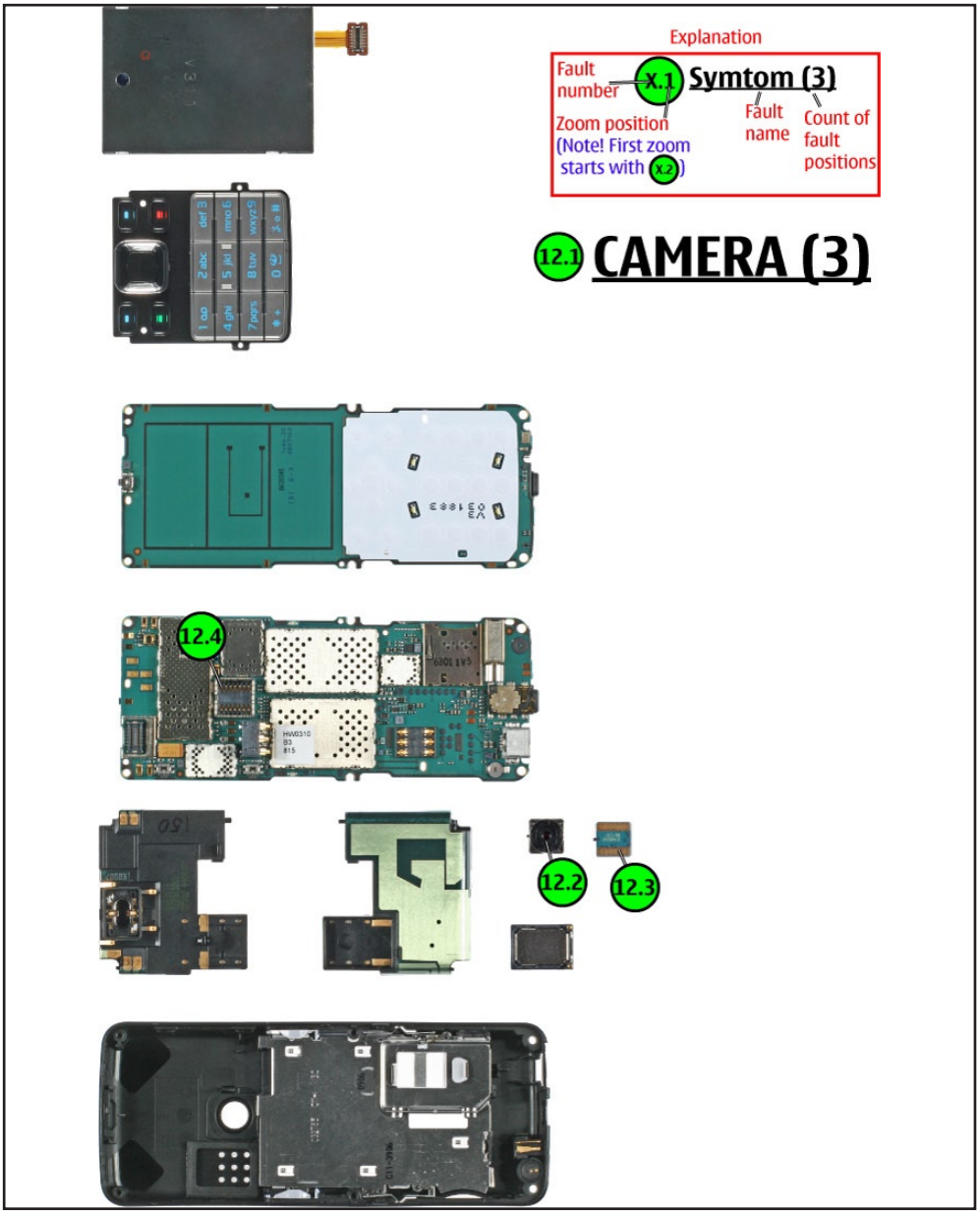
24. QUICK TROUBLE SHOOTER - CAMERA





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